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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,775	09/29/2006	Dirk Diehl	P06,0305	7144
26574	7590	10/05/2007		
SCHIFF HARDIN, LLP PATENT DEPARTMENT 6600 SEARS TOWER CHICAGO, IL 60606-6473			EXAMINER FETZNER, TIFFANY A	
			ART UNIT 2859	PAPER NUMBER
			MAIL DATE 10/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/594,775

Applicant(s)

DIEHL, DIRK

Examiner

Tiffany A. Fetzner

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/29/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement(s) (IDS)'s submitted on **9/29/2006** is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statements. The initialed and dated information disclosure statement(s) (IDS)'s submitted on **9/29/2006** is attached to this Office action.

### *Specification*

3. The disclosure is objected to because of the following informalities:
  - A) The term "**foot angle**" is not described and not a conventional term of the art. Appropriate correction is required.

### *Claim Objections*

4. **Claims 10, 11, and 12** are objected to because of the following informalities: the term "foot angle" is undefined, not a term of the art, and is considered to be a typographical error. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the

United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 7-14 are** rejected under 35 U.S.C. 102(e) and 35 U.S.C. 102(e) as being anticipated by Zhu et al., Us patent application publication 2004/0051529 A1 published March 18<sup>th</sup> 2004, filed September 12<sup>th</sup> 2002.

7. With respect to new **Claim 7**, and corresponding apparatus **claim 14**, **Zhu et al.**, teaches and shows "A method for generating a homogenous magnetization in a spatial examination volume of a magnetic resonance system during examination of a subject located in the examination volume," [See paragraph [0018] "said magnetic resonance system comprising a body coil" ((152) comprising a plurality of resonator segments" [See figure 4] "that are electromagnetically decoupled from each other" (i.e. each one operates at a different phase or frequency from each of the others) [See paragraph [0030], "and a control and evaluation device connected to said plurality of resonator segments", [See paragraphs [0016] through [0018] "said method comprising the steps of: storing predetermined, segment-specific excitation parameters for the respective resonator segments in said control and evaluation device;" [See paragraphs [0020], [0043], [0044] and [0045]] "with said control and evaluation device, separately activating said plurality of resonator segments corresponding to said excitation parameters in a temporal sequence within an excitation sequence using different sets of said excitation parameters with phase distributions of the nuclear magnetization distributions in the examination volume" [See paragraphs [0041] through [0045], [0023], [0024], [0030], [0031], [0035]], "said nuclear magnetization distributions constructively overlapping" [See figure 3] "to form a resulting homogenous total nuclear magnetization distribution in said examination volume by changing said different parameter sets and using a number of said different parameter sets to cause local power losses, introduced into the examination volume as a consequence of activation of the respective segments with said parameter sets, to be locally differently situated in the patient, with said local power losses not coinciding and not mutually reinforcing during said excitation sequence."

[See paragraphs [0017] through **[0024]**, paragraphs [0026] through paragraph [0030] and paragraphs [0041] through [0045]].

8. With respect to new **Claim 8, Zhu et al.**, teaches "storing said plurality of sets of predetermined, segment-specific excitation parameters comprises generating said sets of excitation parameters dependent on a homogeneity of a magnetic field produced by the parameter set, and comprising selecting the parameter sets used in said excitation sequence dependent on said homogeneity" [See paragraph [0043], the abstract, paragraphs [0020] through **[0024]**, paragraphs [0026] through paragraph [0030].

9. With respect to new **Claim 9, Zhu et al.**, teaches "a plurality of sub-volumes" [See figure 3, paragraph [0023]], "and comprising, for each sub-volume, using a plurality of different excitation parameter sets for sequential activation of said resonator segments." [See paragraphs [0024] through [0030] and paragraphs [0041] through [0045]]

10. With respect to new **Claim 10, Zhu et al.**, teaches "selecting said excitation parameter sets to cause **foot angle** amplitudes (flip/spin/excitation angle?) in the respective sub-region to be optimally large, and having respective flip angle phase distributions in said examination volume allowing for said constructive overlapping". [See paragraphs [0017], [0022] through [0030] and [0041] through [0045]],

11. With respect to corresponding new **Claims 11, and 13. Zhu et al.**, teaches "determining at least one of an amplitude of an excitation parameter set and an excitation duration used with an excitation parameter set, and a phase shift of an excitation parameter set, to produce a substantially homogenous **foot angle?** amplitude distribution in said examination volume" [See paragraphs [0017], [0022] through [0030] and [0041] through [0045]],

12. With respect to new **Claim 12, Zhu et al.**, teaches "selecting said excitation parameter sets to cause **foot angle** amplitudes in the respective sub-region to be homogenous, and having respective flip angle phase distributions in said examination

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volume allowing for said constructive overlapping." [See paragraphs [0030] through [0038] and [0041] through [0045]].

### ***Prior Art of Record***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**\*A) Monski jr. et al., US patent 7,084,629 B2**

**\*B) Leussler US patent 6,900,636 B2**

**C) Kang US patent 5,179,332**

### **Conclusion**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

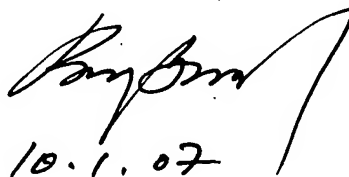
14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(571) 273-8300**.

15. Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TAF

October 1, 2007

  
10.1.07

**BRIJ SHRIVASTAV  
PRIMARY EXAMINER**